

TITLE

PASSIVATED NANO-TITANIUM DIOXIDE PARTICLES AND METHODS
OF MAKING THE SAME

ABSTRACT OF THE DISCLOSURE

5 The invention is directed to a method for reducing the chemical
activity and photo activity of titanium dioxide nanoparticles comprising
adding a densifying agent, such as citric acid, to an aqueous slurry of the
titanium dioxide nanoparticles; treating the aqueous slurry with a source of
silica, such as a solution of sodium silicate, to form silica treated titanium
10 dioxide nanoparticles; treating the silica treated titanium dioxide
nanoparticles with a source of alumina, such as a solution of sodium
aluminate, to form silica and alumina treated titanium dioxide
nanoparticles. The titanium dioxide nanoparticles described herein are
useful in cosmetic, coating and polymer compositions.

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